

**Claim Listing**

**1-27. (canceled)**

**28. (currently amended)** The compound, salt, stereoisomer, or tautomer of claim **90**, wherein the compound is selected from the group consisting of:

N-{{3-[(1-benzyl-4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl)-1,1-dioxido-4H-thieno[2,3-e][1,2,4]thiadiazin-7-yl]methyl}methanesulfonamide;

N-[(3-{1-[(cyclopropylmethyl)amino]-4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl}-1,1-dioxido-4H-thieno[2,3-e][1,2,4]thiadiazin-7-yl)methyl]methanesulfonamide;

N-[(3-{1-[(cyclopropylmethyl)amino]-4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl}-1,1-dioxido-4H-thieno[2,3-e][1,2,4]thiadiazin-7-yl)methyl]ethanesulfonamide;

N-[(3-{1-[(cyclopropylmethyl)amino]-4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl}-1,1-dioxido-4H-thieno[2,3-e][1,2,4]thiadiazin-7-yl)methyl]propane-1-sulfonamide;

N-[(3-{1-[(cyclopropylmethyl)amino]-4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl}-1,1-dioxido-4H-thieno[2,3-e][1,2,4]thiadiazin-7-yl)methyl]propane-2-sulfonamide;

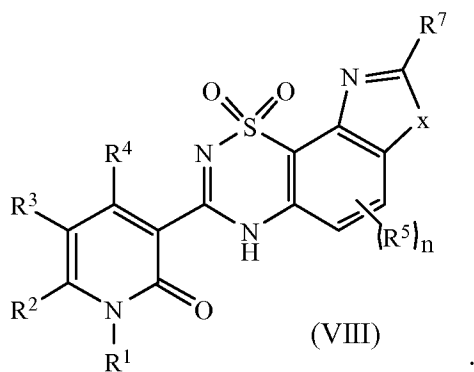
N-[(3-{1-[(cyclopropylmethyl)amino]-4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl}-1,1-dioxido-4H-thieno[2,3-e][1,2,4]thiadiazin-7-yl)methyl]benzenesulfonamide; and

N-[(3-{1-[(cyclopropylmethyl)amino]-4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl}-1,1-dioxido-4H-thieno[2,3-e][1,2,4]thiadiazin-7-yl)methyl]-1-phenylmethanesulfonamide.

**29-51. (canceled)**

**52. (previously presented)** A compound or a pharmaceutically acceptable salt form, stereoisomer, or tautomer thereof, wherein:

the compound corresponds in structure to formula (VIII):



X is NH, N(alkyl), O, or S;

$R^1$  is selected from the group consisting of hydrogen, alkenyl, alkoxyalkyl, alkoxycarbonylalkyl, alkyl, alkylcarbonylalkyl, alkylsulfanylalkyl, alkylsulfinylalkyl, alkylsulfonylalkyl, alkynyl, aryl, arylalkenyl, arylalkyl, arylsulfanylalkyl, arylsulfonylalkyl, carboxyalkyl, cyanoalkyl, cycloalkenyl, cycloalkenylalkyl, cycloalkyl, (cycloalkyl)alkenyl, (cycloalkyl)alkyl, formylalkyl, haloalkoxyalkyl, haloalkyl, heteroaryl, heteroarylalkenyl, heteroarylalkyl, heteroarylsulfonylalkyl, heterocycle, heterocyclealkenyl, heterocyclealkyl, hydroxyalkyl, nitroalkyl,  $R_aR_bN-$ ,  $R_aR_bNalkyl-$ ,  $R_aR_bNC(O)alkyl-$ ,  $R_aR_bNC(O)Oalkyl-$ ,  $R_aR_bNC(O)NR_calkyl-$ ,  $R_fR_gC=N-$ , and  $R_kO-$ , wherein  $R^1$  is substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_c)$ ,  $-(alkyl)(NR_cR_e)$ ,  $-SR_c$ ,  $-S(O)R_c$ ,  $-S(O)_2R_c$ ,  $-OR_c$ ,  $-N(R_c)(R_e)$ ,  $-C(O)R_c$ ,  $-C(O)OR_c$ , and  $-C(O)NR_cR_e$ ;

$R^2$  and  $R^3$  are independently selected from the group consisting of hydrogen, alkenyl, alkynyl, alkoxyalkyl, alkoxycarbonyl, alkyl, aryl, arylalkyl, heteroaryl, heterocycle, heteroarylalkyl, cyano, halo,  $-N(R_a)(R_b)$ ,  $R_aR_bNC(O)-$ ,  $-SR_a$ ,  $-S(O)R_a$ ,  $-S(O)_2R_a$ , and  $R_aC(O)-$ , wherein  $R^2$  and  $R^3$  are independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of  $R_a$ , alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl,  $-(alkyl)(OR_k)$ ,  $-(alkyl)(NR_aR_b)$ ,  $-SR_a$ ,  $-S(O)R_a$ ,  $-S(O)_2R_a$ ,  $-OR_k$ ,  $-N(R_a)(R_b)$ ,  $-C(O)R_a$ ,  $-C(O)OR_a$ , and  $-C(O)NR_aR_b$ ;

alternatively,  $R^2$  and  $R^3$ , together with the carbon atoms to which they are attached, form a five- or six-membered ring selected from the group consisting of aryl, cycloalkyl, heteroaryl, and heterocycle, wherein said aryl, cycloalkyl, heteroaryl, and heterocycle is optionally substituted with  $(R^6)_m$ ;

$R^4$  is selected from the group consisting of alkoxy, arylalkoxy, aryloxy, halo, hydroxy,  $R_aR_bN-$ ,  $N_3-$ , and  $R_cS-$ , wherein  $R^4$  is independently substituted with 0, 1, or 2 substituents independently selected from the group consisting of halo, nitro, cyano,  $-OH$ ,  $-NH_2$ , and  $-COOH$ ;

$R^5$  is independently selected at each occurrence from the group consisting of alkenyl, alkoxy, alkyl, alkynyl, aryl, arylalkyl, arylcarbonyl, aryloxy, azidoalkyl, formyl, halo, haloalkyl, halocarbonyl, heteroaryl, heteroarylalkyl, heterocycle, heterocyclealkyl, hydroxyalkyl, cycloalkyl, cyano, cyanoalkyl, nitro,  $R_aR_bN-$ ,  $R_aC(O)-$ ,  $R_aS-$ ,  $R_a(O)S-$ ,  $R_a(O)_2S-$ ,  $R_aR_bNalkyl-$ ,  $R_a(O)SN(R_f)-$ ,  $R_aSO_2N(R_f)-$ ,  $R_a(O)SN(R_f)alkyl-$ ,  $R_aSO_2N(R_f)alkyl-$ ,  $R_aR_bNSO_2N(R_f)-$ ,  $R_aR_bNSO_2N(R_f)alkyl-$ ,  $R_aR_bNC(O)-$ ,  $R_kOC(O)-$ ,  $R_kOC(O)alkyl-$ ,  $R_kOalkyl-$ ,  $R_aR_bNSO_2-$ ,  $R_aR_bNSO_2alkyl-$ ,  $(R_bO)(R_a)P(O)O-$ , and  $-OR_k$ , wherein each  $R^5$  is independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_c)$ ,  $-(alkyl)(NR_cR_d)$ ,  $-SR_c$ ,  $-S(O)R_c$ ,  $-S(O)_2R_c$ ,  $-OR_c$ ,  $-N(R_c)(R_d)$ ,  $-C(O)R_c$ ,  $-C(O)OR_c$ , and  $-C(O)NR_cR_d$ ;

$R^6$  is independently selected at each occurrence from the group consisting of alkyl, alkenyl, alkynyl, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, heterocyclealkyl,  $-(alkyl)(OR_k)$ ,  $-(alkyl)(NR_aR_b)$ ,  $-SR_a$ ,  $-S(O)R_a$ ,  $-S(O)_2R_a$ ,  $-OR_k$ ,  $-N(R_a)(R_b)$ ,  $-C(O)R_a$ ,  $-C(O)OR_a$ , and  $-C(O)NR_aR_b$ , wherein each  $R^6$  is independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, haloalkyl, cyano, nitro,  $-OR_a$ ,  $-NR_aR_b$ ,  $-SR_a$ ,  $-SOR_a$ ,  $-SO_2R_a$ ,  $-C(O)OR_a$ ,  $-C(O)NR_aR_b$ , and  $-NC(O)R_a$ ;

$R^7$  is independently selected at each occurrence from the group consisting of alkenyl, alkoxy, alkyl, alkynyl, aryl, arylalkyl, arylcarbonyl, aryloxy, azidoalkyl, formyl, halo, haloalkyl, halocarbonyl, heteroaryl, heteroarylalkyl, heterocycle, heterocyclealkyl, hydroxyalkyl, cycloalkyl, cyano, cyanoalkyl, nitro,  $R_aR_bN-$ ,  $R_aC(O)-$ ,  $R_aS-$ ,  $R_a(O)S-$ ,  $R_a(O)_2S-$ ,  $R_aR_bNalkyl-$ ,  $R_a(O)SN(R_f)-$ ,  $R_aSO_2N(R_f)-$ ,  $R_a(O)SN(R_f)alkyl-$ ,  $R_aSO_2N(R_f)alkyl-$ ,  $R_aR_bNSO_2N(R_f)-$ ,  $R_aR_bNSO_2N(R_f)alkyl-$ ,  $R_aR_bNC(O)-$ ,  $R_kOC(O)-$ ,  $R_kOC(O)alkyl-$ ,  $R_kOalkyl-$ ,  $R_aR_bNSO_2-$ ,  $R_aR_bNSO_2alkyl-$ ,  $(R_bO)(R_a)P(O)O-$ , and  $-OR_k$ , wherein each  $R^7$  is independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_c)$ ,  $-(alkyl)(NR_cR_d)$ ,  $-SR_c$ ,  $-S(O)R_c$ ,  $-S(O)_2R_c$ ,  $-OR_c$ ,  $-N(R_c)(R_d)$ ,  $-C(O)R_c$ ,  $-C(O)OR_c$ , and  $-C(O)NR_cR_d$ ;

$R_a$  and  $R_b$ , at each occurrence, are independently selected from the group consisting of hydrogen, alkenyl, alkyl, alkylsulfanylalkyl, aryl, arylalkenyl, arylalkyl, cyanoalkyl, cycloalkenyl, cycloalkenylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkylalkenyl, formylalkyl, haloalkyl, heteroaryl, heteroarylalkenyl, heteroarylalkyl, heterocycle, heterocyclealkenyl, heterocyclealkyl, hydroxyalkylcarbonyl, nitroalkyl,  $R_cR_dN-$ ,  $R_cR_dNalkyl-$ ,  $R_cR_dNC(O)alkyl-$ ,  $R_cSO_2-$ ,  $R_cSO_2alkyl-$ ,  $R_cC(O)-$ ,  $R_cC(O)alkyl-$ ,  $R_cOC(O)-$ ,  $R_cOC(O)alkyl-$ ,  $R_cR_dNalkylC(O)-$ ,  $R_cR_dNC(O)-$ ,  $R_cR_dNC(O)Oalkyl-$ , and  $R_cR_dNC(O)N(R_c)alkyl-$ , wherein  $R_a$  and  $R_b$  are substituted with 0, 1, or 2 substituents selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_c)$ ,  $-(alkyl)(NR_cR_d)$ ,  $-SR_c$ ,  $-S(O)R_c$ ,  $-S(O)_2R_c$ ,  $-OR_c$ ,  $-N(R_c)(R_d)$ ,  $-C(O)R_c$ ,  $-C(O)OR_c$ , and  $-C(O)NR_cR_d$ ;

alternatively,  $R_a$  and  $R_b$ , together with the nitrogen atom to which they are attached, form a three- to six-membered ring selected from the group consisting of heteroaryl and heterocycle, wherein the heteroaryl and heterocycle are independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_c)$ ,  $-(alkyl)(NR_cR_d)$ ,  $-alkylSO_2NR_cR_d$ ,  $-alkylC(O)NR_cR_d$ ,  $-SR_c$ ,  $-S(O)R_c$ ,  $-S(O)_2R_c$ ,  $-OR_c$ ,  $-N(R_c)(R_d)$ ,  $-C(O)R_c$ ,  $-C(O)OR_c$ , and  $-C(O)NR_cR_d$ ;

$R_c$  and  $R_d$ , at each occurrence, are independently selected from the group consisting of hydrogen,  $-NR_fR_h$ ,  $-OR_f$ ,  $-CO(R_f)$ ,  $-SR_f$ ,  $-SOR_f$ ,  $-SO_2R_f$ ,  $-C(O)NR_fR_h$ ,  $-SO_2NR_fR_h$ ,  $-C(O)OR_f$ , alkenyl, alkyl, alkynyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, cycloalkenylalkyl, aryl, arylalkyl, haloalkyl, heteroaryl, heteroarylalkyl, heterocycle, and heterocyclealkyl; wherein each  $R_c$  and  $R_d$  is independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_f)$ ,  $-(alkyl)(NR_fR_h)$ ,  $-SR_f$ ,  $-S(O)R_f$ ,  $-S(O)_2R_f$ ,  $-OR_f$ ,  $-N(R_f)(R_h)$ ,  $-C(O)R_f$ ,  $-C(O)OR_f$ ,  $-C(O)NR_fR_h$ ,  $-C(O)N(H)NR_fR_h$ ,  $-N(R_c)C(O)OR_f$ ,  $-N(R_c)SO_2NR_fR_h$ ,  $-N(R_c)C(O)NR_fR_h$ ,  $-alkylN(R_c)C(O)OR_f$ ,  $-alkylN(R_c)SO_2NR_fR_h$ , and  $-alkylN(R_c)C(O)NR_fR_h$ ;

alternatively,  $R_c$  and  $R_d$ , together with the nitrogen atom to which they are attached, form a three- to six-membered ring selected from the group consisting of heteroaryl and heterocycle, wherein the heteroaryl and heterocycle are independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_f)$ ,  $-(alkyl)(NR_fR_h)$ ,  $-SR_f$ ,  $-S(O)R_f$ ,  $-S(O)_2R_f$ ,  $-OR_f$ ,  $-N(R_f)(R_h)$ ,  $-C(O)R_f$ ,  $-C(O)OR_f$ , and  $-C(O)NR_fR_h$ ;

$R_e$  is selected from the group consisting of hydrogen, alkenyl, alkyl, and cycloalkyl;

$R_f$ ,  $R_g$ , and  $R_h$ , at each occurrence, are independently selected from the group consisting of hydrogen, alkyl, alkenyl, aryl, arylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, cycloalkenylalkyl, heterocycle, heterocyclealkyl, heteroaryl, and heteroarylalkyl; wherein each  $R_f$ ,  $R_g$ , and  $R_h$  is independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, cyano, halo, oxo, nitro, aryl, arylalkyl, cycloalkyl, cycloalkenyl, heterocycle, heteroaryl, heteroarylalkyl,  $-OH$ ,  $-O(alkyl)$ ,  $-NH_2$ ,  $-N(H)(alkyl)$ ,  $-N(alkyl)_2$ ,  $-S(alkyl)$ ,  $-S(O)(alkyl)$ ,  $-SO_2alkyl$ ,  $-alkyl-OH$ ,  $-alkyl-O-alkyl$ ,  $-alkylNH_2$ ,  $-alkylN(H)(alkyl)$ ,  $-alkylN(alkyl)_2$ ,  $-alkylS(alkyl)$ ,  $-alkylS(O)(alkyl)$ ,  $-alkylSO_2alkyl$ ,  $-N(H)C(O)NH_2$ ,  $-C(O)OH$ ,  $-C(O)O(alkyl)$ ,  $-C(O)alkyl$ ,  $-C(O)NH_2$ ,  $-C(O)NH_2$ ,  $-C(O)N(H)(alkyl)$ , and  $-C(O)N(alkyl)_2$ ;

alternatively,  $R_f$  and  $R_g$ , together with the carbon atom to which they are attached, form a three- to seven-membered ring selected from the group consisting of cycloalkyl, cycloalkenyl, and heterocycle;

alternatively,  $R_f$  and  $R_h$ , together with the nitrogen atom to which they are attached, form a three- to seven-membered ring selected from the group consisting of heterocycle and heteroaryl, wherein each of the heterocycle and heteroaryl is independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, cyano, halo, oxo, nitro, aryl, arylalkyl, cycloalkyl, cycloalkenyl, heterocycle, heteroaryl, heteroarylalkyl,  $-OH$ ,  $-O(alkyl)$ ,  $-NH_2$ ,  $-N(H)(alkyl)$ ,  $-N(alkyl)_2$ ,  $-S(alkyl)$ ,  $-S(alkyl)$ ,  $-S(O)(alkyl)$ ,  $-alkyl-OH$ ,  $-alkyl-O-alkyl$ ,  $-alkylNH_2$ ,  $-alkylN(H)(alkyl)$ ,

-alkylS(alkyl), -alkylS(O)(alkyl), -alkylSO<sub>2</sub>alkyl, -alkylN(alkyl)<sub>2</sub>, -N(H)C(O)NH<sub>2</sub>, -C(O)OH, -C(O)O(alkyl), -C(O)alkyl, -C(O)NH<sub>2</sub>, -C(O)NH<sub>2</sub>, -C(O)N(H)(alkyl), and -C(O)N(alkyl)<sub>2</sub>;

R<sub>k</sub> is selected from the group consisting of hydrogen, alkenyl, alkyl, aryl, arylalkyl, cyanoalkyl, cycloalkenyl, cycloalkenylalkyl, cycloalkyl, cycloalkylalkyl, formylalkyl, haloalkyl, heteroaryl, heteroarylalkyl, heterocycle, heterocyclealkyl, nitroalkyl, R<sub>a</sub>R<sub>b</sub>Nalkyl-, R<sub>a</sub>Oalkyl-, R<sub>a</sub>R<sub>b</sub>NC(O)-, R<sub>a</sub>R<sub>b</sub>NC(O)alkyl, R<sub>a</sub>S-, R<sub>a</sub>S(O)-, R<sub>a</sub>SO<sub>2</sub>-, R<sub>a</sub>Salkyl-, R<sub>a</sub>(O)Salkyl-, R<sub>a</sub>SO<sub>2</sub>alkyl-, R<sub>a</sub>OC(O)-, R<sub>a</sub>OC(O)alkyl-, R<sub>a</sub>C(O)-, and R<sub>a</sub>C(O)alkyl-, wherein each R<sub>k</sub> is substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl, -(alkyl)(OR<sub>c</sub>), -(alkyl)(NR<sub>c</sub>R<sub>d</sub>), -SR<sub>c</sub>, -S(O)R<sub>c</sub>, -S(O)<sub>2</sub>R<sub>c</sub>, -OR<sub>c</sub>, -N(R<sub>c</sub>)(R<sub>d</sub>), -C(O)R<sub>c</sub>, -C(O)OR<sub>c</sub>, and -C(O)NR<sub>c</sub>R<sub>d</sub>;

m is 0, 1, 2, 3, or 4; and

n is 0, 1, or 2.

**53. (previously presented)** The compound, salt, stereoisomer, or tautomer of claim **52**, wherein R<sup>2</sup> and R<sup>3</sup>, together with the carbon atoms to which they are attached, form a five- or six-membered ring selected from the group consisting of aryl, cycloalkyl, heteroaryl and heterocycle, wherein said aryl, cycloalkyl, heteroaryl, and heterocycle is optionally substituted with (R<sup>6</sup>)<sub>m</sub>.

**54. (previously presented)** The compound, salt, stereoisomer, or tautomer of claim **53**, wherein R<sup>2</sup> and R<sup>3</sup>, together with the carbon atoms to which they are attached, form a five- or six-membered ring selected from the group consisting of phenyl, pyridyl, pyridazinyl, pyrimidinyl, pyrazolyl, cyclopentyl, cyclohexyl, and thienyl.

**55. (previously presented)** The compound, salt, stereoisomer, or tautomer of claim **54**, wherein R<sup>4</sup> is hydroxy.

**56. (previously presented)** The compound, salt, stereoisomer, or tautomer of claim **55**, wherein the compound is selected from the group consisting of:

3-(1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl)-4-hydroxy-1-(isobutylamino)quinolin-2(1H)-one;

3-[8-(chloromethyl)-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl]-4-hydroxy-1-(isobutylamino)quinolin-2(1H)-one;

3-{3-[4-hydroxy-1-(isobutylamino)-2-oxo-1,2-dihydroquinolin-3-yl]-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-8-yl}propanoic acid;

3-(8-{{(2-aminoethyl)amino}methyl}-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl)-4-hydroxy-1-(isobutylamino)quinolin-2(1H)-one;

methyl {3-[4-hydroxy-1-(isobutylamino)-2-oxo-1,2-dihydroquinolin-3-yl]-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-8-yl} acetate;

4-hydroxy-3-(8-{{(3R)-3-hydroxypyrrolidin-1-yl}methyl}-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl)-1-(isobutylamino)quinolin-2(1H)-one;

3-[1,1-dioxido-8-(pyridinium-1-ylmethyl)-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl]-1-(isobutylamino)-2-oxo-1,2-dihydroquinolin-4-olate;

3-[1,1-dioxido-8-(pyrrolidin-1-ylmethyl)-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl]-4-hydroxy-1-(isobutylamino)quinolin-2(1H)-one;

3-[8-(3-aminophenyl)-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl]-4-hydroxy-1-(isobutylamino)quinolin-2(1H)-one;

3-[8-(aminomethyl)-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl]-4-hydroxy-1-(isobutylamino)quinolin-2(1H)-one;

4-hydroxy-3-[8-(hydroxymethyl)-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl]-1-(isobutylamino)quinolin-2(1H)-one;

3-{8-[(butylamino)methyl]-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl}-4-hydroxy-1-(isobutylamino)quinolin-2(1H)-one;

3-[9-(butylamino)-1,1-dioxido-4H,8H-[1,4]oxazino[2,3-h][1,2,4]benzothiadiazin-3-yl]-4-hydroxy-1-(isobutylamino)quinolin-2(1H)-one;

4-hydroxy-1-(3-methylbutyl)-3-(8-methyl-1,1-dioxido-4H-[1,3]oxazolo[5,4-h][1,2,4]benzothiadiazin-3-yl)-1,8-naphthyridin-2(1H)-one;

3-[1,1-dioxido-8-(trifluoromethyl)-4,7-dihydroimidazo[4,5-h][1,2,4]benzothiadiazin-3-yl]-4-hydroxy-1-(3-methylbutyl)-1,8-naphthyridin-2(1H)-one;

4-hydroxy-3-(8-hydroxy-1,1-dioxido-4,7-dihydroimidazo[4,5-h][1,2,4]benzothiadiazin-3-yl)-1-(3-methylbutyl)-1,8-naphthyridin-2(1H)-one;

4-hydroxy-1-(3-methylbutyl)-3-(8-methyl-1,1-dioxido-4,7-dihydroimidazo[4,5-h][1,2,4]benzothiadiazin-3-yl)-1,8-naphthyridin-2(1H)-one;

3-[1,1-dioxido-8-(pentafluoroethyl)-4,7-dihydroimidazo[4,5-h][1,2,4]benzothiadiazin-3-yl]-4-hydroxy-1-(3-methylbutyl)-1,8-naphthyridin-2(1H)-one;

3-[8-(chloromethyl)-1,1-dioxido-4,7-dihydroimidazo[4,5-h][1,2,4]benzothiadiazin-3-yl]-4-hydroxy-1-(3-methylbutyl)-1,8-naphthyridin-2(1H)-one;

{3-[4-hydroxy-1-(3-methylbutyl)-2-oxo-1,2-dihydro-1,8-naphthyridin-3-yl]-1,1-dioxido-4,7-

dihydroimidazo[4,5-*h*][1,2,4]benzothiadiazin-8-yl} acetonitrile;

methyl {3-[4-hydroxy-1-(3-methylbutyl)-2-oxo-1,2-dihydro-1,8-naphthyridin-3-yl]-1,1-dioxido-4,7-dihydroimidazo[4,5-*h*][1,2,4]benzothiadiazin-8-yl} acetate;

3-(9,9-dioxido-6*H*-[1,2,5]thiadiazolo[3,4-*h*][1,2,4]benzothiadiazin-7-yl)-4-hydroxy-1-(3-methylbutyl)-1,8-naphthyridin-2(1*H*)-one;

3-(8-amino-1,1-dioxido-4,7-dihydroimidazo[4,5-*h*][1,2,4]benzothiadiazin-3-yl)-4-hydroxy-1-(3-methylbutyl)-1,8-naphthyridin-2(1*H*)-one; and

4-hydroxy-3-[8-(hydroxymethyl)-1,1-dioxido-4,9-dihydroimidazo[4,5-*h*][1,2,4]benzothiadiazin-3-yl]-1-(3-methylbutyl)-1,8-naphthyridin-2(1*H*)-one.

**57. (previously presented)** A compound or a pharmaceutically acceptable salt form, stereoisomer, or tautomer thereof, wherein the compound is selected from the group consisting of:

*N*-{3-[1-(cyclobutylamino)-4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl]-1,1-dioxido-4*H*-1,2,4-benzothiadiazin-7-yl} methanesulfonamide;

*N*-[(3-{1-[(cyclopropylmethyl)amino]-4-hydroxy-2-oxo-1,2-dihydroquinolin-3-yl}-1,1-dioxido-4*H*-thieno[2,3-*e*][1,2,4]thiadiazin-7-yl)methyl]methanesulfonamide;

*N*-(3-{1-[(cyclopropylmethyl)amino]-4-hydroxy-2-oxo-1,2-dihydro-3-quinolinyll}-1,1-dioxido-4*H*-1,2,4-benzothiadiazin-7-yl)methanesulfonamide;

*N*-{3-[1-(cyclobutylamino)-4-hydroxy-2-oxo-1,2-dihydro-3-quinolinyll]-1,1-dioxido-4*H*-1,2,4-benzothiadiazin-7-yl} sulfamide; and

*N*-{3-[1-(cyclobutylamino)-4-hydroxy-2-oxo-1,2-dihydro-3-quinolinyll]-1,1-dioxido-4*H*-1,2,4-benzothiadiazin-7-yl}-*N*-methylsulfamide.

**58-61. (canceled)**

**62. (previously presented)** A pharmaceutical composition comprising a therapeutically effective amount of one or more compounds, salts, stereoisomers, or tautomers recited in claim **57** and a pharmaceutically acceptable carrier.

**63. (previously presented)** The pharmaceutical composition of claim **62**, wherein the composition further comprises one or more agents selected from the group consisting of a host immune modulator and a second antiviral agent.

**64. (previously presented)** The pharmaceutical composition of claim **63**, wherein each of the one or more host immune modulators is selected from the group consisting of interferon-alpha, pegylated-

interferon-alpha, interferon-beta, interferon-gamma, a cytokine, and a vaccine optionally comprising an antigen and an adjuvant.

**65. (previously presented)** The pharmaceutical composition of claim **63**, wherein the second antiviral agent inhibits replication of HCV by inhibiting host cellular functions associated with viral replication.

**66. (previously presented)** The pharmaceutical composition of claim **63**, wherein the second antiviral agent inhibits the replication of HCV by targeting proteins of the viral genome.

**67. (previously presented)** The pharmaceutical composition of claim **62**, wherein the composition further comprises an agent or combination of agents that treat or alleviate symptoms of HCV infection.

**68. (previously presented)** The pharmaceutical composition of claim **62**, wherein the composition further comprises one or more agents that treat patients for disease caused by hepatitis B (HBV) infection.

**69. (previously presented)** The pharmaceutical composition of claim **68**, wherein each of the one or more agents that treat patients for disease caused by hepatitis B (HBV) infection is selected from the group consisting of L-deoxythymidine, adefovir, lamivudine, and tenfovir.

**70. (previously presented)** The pharmaceutical composition of claim **62**, wherein the composition further comprises one or more agents that treat patients for disease caused by human immunodeficiency virus (HIV) infection.

**71. (previously presented)** The pharmaceutical composition of claim **70**, wherein each of the one or more agents that treat patients for disease caused by human immunodeficiency virus (HIV) infection is selected from the group consisting of ritonavir, lopinavir, indinavir, nelfinavir, saquinavir, amprenavir, atazanavir, tipranavir, TMC-114, fosamprenavir, zidovudine, lamivudine, didanosine, stavudine, tenofovir, zalcitabine, abacavir, efavirenz, nevirapine, delavirdine, TMC-125, L-870812, S-1360, enfuvirtide (T-20), and T-1249.

**72-73. (canceled)**

**74. (previously presented)** A method of treating an infection caused by a hepatitis C virus,

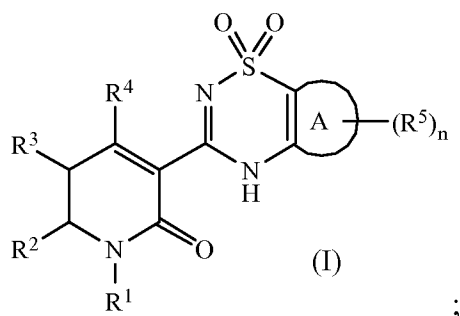


wherein the method comprises administering to a patient in need of such treatment a therapeutically effective amount of one or more compounds, salts, stereoisomers, or tautomers recited in claim 57.

**75-89. (canceled)**

**90. (previously presented)** A compound, or a pharmaceutically acceptable salt, stereoisomer, or tautomer thereof, wherein:

the compound corresponds in structure to formula (I):



A is a monocyclic or bicyclic ring selected from the group consisting of aryl, cycloalkyl, cycloalkenyl, heteroaryl, and heterocycle;

$R^1$  is  $R_aR_bN-$ ;

$R^2$  and  $R^3$ , together with the carbon atoms to which they are attached, form a five- or six-membered ring selected from the group consisting of aryl, cycloalkyl, heteroaryl, and heterocycle;

$R^4$  is selected from the group consisting of alkoxy, arylalkoxy, aryloxy, halo, hydroxy,  $R_aR_bN-$ ,  $N_3-$ , and  $R_eS-$ , wherein  $R^4$  is substituted with 0, 1, or 2 substituents independently selected from the group consisting of halo, nitro, cyano,  $-OH$ ,  $-NH_2$ , and  $-COOH$ ;

$R^5$  is independently selected at each occurrence from the group consisting of alkenyl, alkoxy, alkyl, alkynyl, aryl, arylalkyl, arylcarbonyl, aryloxy, azidoalkyl, formyl, halo, haloalkyl, halocarbonyl, heteroaryl, heteroarylalkyl, heterocycle, heterocyclealkyl, hydroxyalkyl, cycloalkyl, cyano, cyanoalkyl, nitro,  $R_aR_bN-$ ,  $R_aC(O)-$ ,  $R_aS-$ ,  $R_a(O)S-$ ,  $R_a(O)_2S-$ ,  $R_aR_bNalkyl-$ ,  $R_a(O)SN(R_f)-$ ,  $R_aSO_2N(R_f)-$ ,  $R_a(O)SN(R_f)alkyl-$ ,  $R_aSO_2N(R_f)alkyl-$ ,  $R_aR_bNSO_2N(R_f)-$ ,  $R_aR_bNSO_2N(R_f)alkyl-$ ,  $R_aR_bNC(O)-$ ,  $R_kOC(O)-$ ,  $R_kOC(O)alkyl-$ ,  $R_kOalkyl-$ ,  $R_aR_bNSO_2-$ ,  $R_aR_bNSO_2alkyl-$ ,  $(R_bO)(R_a)P(O)O-$  and  $-OR_k$ , wherein each  $R^5$  is independently substituted with 0, 1, 2 or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_c)$ ,  $-(alkyl)(NR_cR_d)$ ,  $-SR_c$ ,  $-S(O)R_c$ ,  $-S(O)_2R_c$ ,  $-OR_c$ ,  $-N(R_c)(R_d)$ ,  $-C(O)R_c$ ,  $-C(O)OR_c$  and  $-C(O)NR_cR_d$ ;

$R_a$  and  $R_b$ , at each occurrence, are independently selected from the group consisting of hydrogen,

alkenyl, alkyl, alkylsulfanylalkyl, aryl, arylalkenyl, arylalkyl, cyanoalkyl, cycloalkenyl, cycloalkenylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkylalkenyl, formylalkyl, haloalkyl, heteroaryl, heteroarylalkenyl, heteroarylalkyl, heterocycle, heterocyclealkenyl, heterocyclealkyl, hydroxyalkylcarbonyl, and nitroalkyl;

$R_c$  and  $R_d$ , at each occurrence, are independently selected from the group consisting of hydrogen,  $-NR_fR_h$ ,  $-OR_f$ ,  $-CO(R_f)$ ,  $-SR_f$ ,  $-SOR_f$ ,  $-SO_2R_f$ ,  $-C(O)NR_fR_h$ ,  $-SO_2NR_fR_h$ ,  $-C(O)OR_f$ , alkenyl, alkyl, alkynyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, cycloalkenylalkyl, aryl, arylalkyl, haloalkyl, heteroaryl, heteroarylalkyl, heterocycle, and heterocycloalkyl, wherein each  $R_c$  and  $R_d$  is independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_f)$ ,  $-(alkyl)(NR_fR_h)$ ,  $-SR_f$ ,  $-S(O)R_f$ ,  $-S(O)_2R_f$ ,  $-OR_f$ ,  $-N(R_f)(R_h)$ ,  $-C(O)R_f$ ,  $-C(O)OR_f$ ,  $-C(O)NR_fR_h$ ,  $-C(O)N(H)NR_fR_h$ ,  $-N(R_e)C(O)OR_f$ ,  $-N(R_e)SO_2NR_fR_h$ ,  $-N(R_e)C(O)NR_fR_h$ ,  $-alkylN(R_e)C(O)OR_f$ ,  $-alkylN(R_e)SO_2NR_fR_h$ , and  $-alkylN(R_e)C(O)NR_fR_h$ ;

alternatively,  $R_c$  and  $R_d$ , together with the nitrogen atom to which they are attached, form a three- to six-membered ring selected from the group consisting of heteroaryl and heterocycle, wherein the heteroaryl and heterocycle are independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl,  $-(alkyl)(OR_f)$ ,  $-(alkyl)(NR_fR_h)$ ,  $-SR_f$ ,  $-S(O)R_f$ ,  $-S(O)_2R_f$ ,  $-OR_f$ ,  $-N(R_f)(R_h)$ ,  $-C(O)R_f$ ,  $-C(O)OR_f$ , and  $-C(O)NR_fR_h$ ;

$R_e$  is selected from the group consisting of hydrogen, alkenyl, alkyl, and cycloalkyl;

$R_f$  and  $R_h$ , at each occurrence, are independently selected from the group consisting of hydrogen, alkyl, alkenyl, aryl, arylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, cycloalkenylalkyl, heterocycle, heterocyclealkyl, heteroaryl, and heteroarylalkyl, wherein each  $R_f$ ,  $R_g$ , and  $R_h$  is independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, cyano, halo, oxo, nitro, aryl, arylalkyl, cycloalkyl, cycloalkenyl, heterocycle, heteroaryl, heteroarylalkyl,  $-OH$ ,  $-O(alkyl)$ ,  $-NH_2$ ,  $-N(H)(alkyl)$ ,  $-N(alkyl)_2$ ,  $-S(alkyl)$ ,  $-S(O)(alkyl)$ ,  $-SO_2alkyl$ ,  $-alkyl-OH$ ,  $-alkyl-O-alkyl$ ,  $-alkylNH_2$ ,  $-alkylN(H)(alkyl)$ ,  $-alkylN(alkyl)_2$ ,  $-alkylS(alkyl)$ ,  $-alkylS(O)(alkyl)$ ,  $-alkylSO_2alkyl$ ,  $-N(H)C(O)NH_2$ ,  $-C(O)OH$ ,  $-C(O)O(alkyl)$ ,  $-C(O)alkyl$ ,  $-C(O)NH_2$ ,  $-C(O)NH_2$ ,  $-C(O)N(H)(alkyl)$ , and  $-C(O)N(alkyl)_2$ ;

alternatively,  $R_f$  and  $R_h$ , together with the nitrogen atom to which they are attached, form a three- to seven-membered ring selected from the group consisting of heterocycle and heteroaryl, wherein each of the heterocycle and heteroaryl is independently substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, cyano, halo, oxo, nitro, aryl, arylalkyl,

cycloalkyl, cycloalkenyl, heterocycle, heteroaryl, heteroarylalkyl, -OH, -O(alkyl), -NH<sub>2</sub>, -N(H)(alkyl), -N(alkyl)<sub>2</sub>, -S(alkyl), -S(alkyl), -S(O)(alkyl), -alkyl-OH, -alkyl-O-alkyl, -alkylNH<sub>2</sub>, -alkylN(H)(alkyl), -alkylS(alkyl), -alkylS(O)(alkyl), -alkylSO<sub>2</sub>alkyl, -alkylN(alkyl)<sub>2</sub>, -N(H)C(O)NH<sub>2</sub>, -C(O)OH, -C(O)O(alkyl), -C(O)alkyl, -C(O)NH<sub>2</sub>, -C(O)NH<sub>2</sub>, -C(O)N(H)(alkyl), and -C(O)N(alkyl)<sub>2</sub>;

R<sub>k</sub> is selected from the group consisting of hydrogen, alkenyl, alkyl, aryl, arylalkyl, cyanoalkyl, cycloalkenyl, cycloalkenylalkyl, cycloalkyl, cycloalkylalkyl, formylalkyl, haloalkyl, heteroaryl, heteroarylalkyl, heterocycle, heterocyclealkyl, nitroalkyl, R<sub>a</sub>R<sub>b</sub>Nalkyl-, R<sub>a</sub>Oalkyl-, R<sub>a</sub>R<sub>b</sub>NC(O)-, R<sub>a</sub>R<sub>b</sub>NC(O)alkyl, R<sub>a</sub>S-, R<sub>a</sub>S(O)-, R<sub>a</sub>SO<sub>2</sub>-, R<sub>a</sub>Salkyl-, R<sub>a</sub>(O)Salkyl-, R<sub>a</sub>SO<sub>2</sub>alkyl-, R<sub>a</sub>OC(O)-, R<sub>a</sub>OC(O)alkyl-, R<sub>a</sub>C(O)-, and R<sub>a</sub>C(O)alkyl-, wherein each R<sub>k</sub> is substituted with 0, 1, 2, or 3 substituents independently selected from the group consisting of alkyl, alkenyl, alkynyl, oxo, halo, cyano, nitro, haloalkyl, haloalkoxy, aryl, heteroaryl, heterocycle, arylalkyl, heteroarylalkyl, alkoxyalkoxyalkyl, -(alkyl)(OR<sub>c</sub>), -(alkyl)(NR<sub>c</sub>R<sub>d</sub>), -SR<sub>c</sub>, -S(O)R<sub>c</sub>, -S(O)<sub>2</sub>R<sub>c</sub>, -OR<sub>c</sub>, -N(R<sub>c</sub>)(R<sub>d</sub>), -C(O)R<sub>c</sub>, -C(O)OR<sub>c</sub> and -C(O)NR<sub>c</sub>R<sub>d</sub>; and

n is 0, 1, 2, 3, or 4.

**91. (currently amended)** The compound, salt, stereoisomer, or tautomer of claim **52**, wherein:

R<sup>5</sup> is R<sub>a</sub>SO<sub>2</sub>N(R<sub>f</sub>)alkyl-, and

R<sub>a</sub> and R<sub>b</sub>, at each occurrence, are independently selected from the group consisting of hydrogen, alkenyl, alkyl, alkylsulfanylalkyl, aryl, arylalkenyl, arylalkyl, cyanoalkyl, cycloalkenyl, cycloalkenylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkylalkenyl, formylalkyl, haloalkyl, heteroaryl, heteroarylalkenyl, heteroarylalkyl, heterocycle, heterocyclealkenyl, heterocyclealkyl, hydroxyalkylcarbonyl, and nitroalkyl.

**92. (currently amended)** The compound, salt, stereoisomer, or tautomer of claim **52**, wherein:

R<sup>1</sup> is R<sub>a</sub>R<sub>b</sub>N-, and

R<sub>a</sub> and R<sub>b</sub>, at each occurrence, are independently selected from the group consisting of hydrogen, alkenyl, alkyl, alkylsulfanylalkyl, aryl, arylalkenyl, arylalkyl, cyanoalkyl, cycloalkenyl, cycloalkenylalkyl, cycloalkyl, cycloalkylalkyl, cycloalkylalkenyl, formylalkyl, haloalkyl, heteroaryl, heteroarylalkenyl, heteroarylalkyl, heterocycle, heterocyclealkenyl, heterocyclealkyl, hydroxyalkylcarbonyl, and nitroalkyl.

**93-95. (canceled)**

**96. (previously presented)** A method of treating an infection caused by a hepatitis C virus, wherein the method comprises administering to a patient in need of such treatment a therapeutically

effective amount of one or more compounds, salts, stereoisomers, or tautomers recited in claim **52**.

**97. (previously presented)** A method of treating an infection caused by a hepatitis C virus, wherein the method comprises administering to a patient in need of such treatment a therapeutically effective amount of one or more compounds, salts, stereoisomers, or tautomers recited in claim **90**.